Amendments to the Claims

This listings of claims will replace all prior versions and listings of the claims in the application.

1. (Currently Amended) A method of selecting a data signal source from amongst a plurality of potential sources, the method comprising:

(a) selecting a source from amongst the plurality of potential sources;

(b) enabling directional connection between the source and a physical interface using a biasing switch;

~~(b)~~(c) monitoring the source selected in step (a) at a programmable logic device for an indication of communication speed, wherein monitoring the source includes monitoring for an indication of a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse received at the programmable logic device via a tri-state converter;

~~(c)~~(d) returning to step (a) if no indication of communication speed is observed; and

~~(d)~~(e) maintaining selection of the source of step (a) if an indication of communication speed is observed.

2. (Previously Presented) The method of claim 1, further comprising:

returning to step (a), selecting a second source from amongst the plurality of potential sources, upon absence of a data signal from the source previously selected in step (a).

3-5. (Canceled)

6. (Currently Amended) A method of selecting a data signal source from amongst a plurality of potential sources, the method comprising:

(a) selecting a source from amongst the plurality of potential sources;

(b) enabling directional connection between the source and a physical interface using a biasing switch;

~~(b)~~(c) monitoring the source selected in step (a) at a programmable logic device for an indication of an ensuing autonegotiation period, wherein monitoring the source includes monitoring for an indication of a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse received at the programmable logic device via a tri-state converter;

~~(c)~~(d) waiting for expiration of the ensuing autonegotiation period;

~~(d)~~(e) returning to step (a) if after expiration of the autonegotiation period, no indication of communication speed is observed; and

~~(e)~~(f) maintaining selection of the source previously selected in step (a) if after expiration of the autonegotiation period, an indication of communication speed is observed.

7. (Previously Presented) The method of claim 6, further comprising:

returning to step (a), selecting a second source from amongst the plurality of potential sources, upon absence of a data signal from the source previously selected in step (a).

8-9. (Canceled)

10. (Currently Amended) The method of claim 6, wherein waiting for the expiration of the autonegotiation period comprises waiting ~~approximately~~ 20 seconds.

11. (Currently Amended) A method of selecting a data signal source from amongst a plurality of potential sources, the method comprising:

(a) selecting a source from amongst the plurality of potential sources;

(b) enabling directional connection between the source and a physical interface using a biasing switch;

~~(b)~~(c) monitoring the source selected in step (a) at a programmable logic device for an indication of communication speed or an ensuing autonegotiation period, wherein monitoring the source includes monitoring for an indication of a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse received at the programmable logic device via a tri-state converter;

~~(c)~~(d) returning to step (a) if no indication of communication speed or an ensuing autonegotiation period is observed;

~~(d)~~(e) maintaining the selection of step (a), if an indication of communication speed is observed;

~~(e)~~(f) waiting for expiration of the ensuing autonegotiation period, if an indication of an ensuing autonegotiation period is observed;

~~(f)~~(g) returning to step (a) if after expiration of the autonegotiation period, no indication of communication speed is observed; and

~~(g)~~(h) maintaining selection of the source previously selected in step (a) if after expiration of the autonegotiation period, an indication of communication speed is observed.

12. (Previously Presented) The method of claim 11, further comprising the following step to be carried out after either steps (d) or (g): returning to step (a) upon absence of a data signal from the source.

13-17. (Canceled)

18. (Currently Amended) The method of claim 11, wherein waiting for the expiration of the autonegotiation period comprises waiting ~~approximately~~ 20 seconds.

19. (Currently Amended) A method for a media converter to identify which of two pairs of pins on a data jack is carrying a data signal sent from a network device, wherein the media converter includes a physical interface having an input port into which the data signal from the network device is to be supplied, and wherein the media converter further includes a switch interposed between the data jack and the physical interface and at least one biasing switch enabling a directional connection between the physical interface and the data jack, the method comprising:

using the switch and the biasing switch to alternately couple the input port on the physical interface between a first pair of pins on the data jack and a second pair of pins on the data jack;

monitoring a pair of pins coupled to the input port of the physical interface for an indication of the speed at which the network device will communicate, the pair of pins corresponding to at least one of the first pair of pins and the second pair of pins, wherein monitoring the pair of pins includes monitoring for a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse using a programmable logic device, the programmable logic device receiving the indication of the communication speed via a tri-state converter;

upon determining the communication speed, ceasing to alternately couple the physical interface between the first pair of pins on the data jack and the second pair of pins on the data jack.

20. (Original) The method of claim 19, wherein the data jack is an RJ-45 data jack.

21. (Previously Presented) The method of claim 19, wherein monitoring the pair of pins coupled to the input port of the physical interface for an indication of the speed at which the network device will communicate comprises monitoring the pair of pins for an idle signal carried upon the pair of pins.

22-23. (Canceled)

24. (Currently Amended) The method of claim 19, further comprising:

monitoring the pair of pins coupled to the input port of the physical interface for an indication of an ensuing autonegotiation period;

waiting for expiration of the ensuing autonegotiation period, if an indication of an ensuing autonegotiation period is observed;

after expiration of the ensuing autonegotiation period, monitoring a pair of pins coupled to the input port of the physical interface for an indication of the speed at which the network device will communicate, the pair of pins corresponding to at least one of the first pair of pins ~~puns~~ and the second pair of pins; and

upon determining the communication speed, ceasing to alternately couple the physical interface between the first pair of pins on the data jack and the second pair of pins on the data jack.

25. (Previously Presented) The method of claim 24, wherein

monitoring the pair of pins coupled to the input port of the physical interface for an indication of an ensuing autonegotiation period comprises monitoring the pair of pins for an idle signal carried upon the pair of pins.

26. (Canceled)

27. (Currently Amended) A media converter comprising:

a switch having a first end and a second end, the first end capable of coupling to any of a plurality of potential sources of a data signal, the second end coupled to an input port of a physical interface that converts the data signal from a signal that propagates along a first medium to a signal that propagates along a second medium;

at least one biasing switch enabling a directional connection between the physical interface and a selected source from among the plurality of potential sources;

an optical transceiver coupled to the physical interface;

a logic device coupled to the physical interface via a tri-state converter;

wherein the logic device is arranged to

cause the switch to iteratively couple a first end of the switch to each of the plurality of potential data sources on a one-by-one basis, until instructed to cease such iterative coupling by the logic device;

receive a signal from the physical interface, the signal communicating a data rate at which the data signal will be communicated; and

upon reception of the signal communicating the data rate at which the data signal will be communicated, instruct the switch to cease the iterative coupling;

wherein the signal communicating a data rate at which the data signal will be communicated is a two-bit digital signal derived from a tri-state signal provided by the physical interface.

28. (Original) The media converter of claim 27, wherein the logic device is further arranged to:

receive a signal from the physical interface, the signal communicating that a period during which the data signal will be at least partially absent is ensuing;

wait for the period during which the data signal will be at least partially absent to expire;

receive a signal from the physical interface, the signal communicating a data rate at which the data signal will be communicated; and

upon reception of the signal communicating the data rate at which the data signal will be communicated, instruct the switch to cease the iterative coupling.

29. (Original) The media converter of claim 28, wherein the period during which the data signal will be at least partially absent to comprises an autonegotiation period.

30. (Original) The media converter of claim 27, wherein the logic device is a microprocessor.

31. (Original) The media converter of claim 27, wherein the logic device is an application specific integrated circuit.

32. (Original) The media converter of claim 27, wherein the first medium comprises a metallic conduction path.

33. (Original) The media converter of claim 27, wherein the second medium comprises an optical fiber.

34. (Original) The media converter of claim 27, wherein the first medium comprises an optical fiber.

35. (Original) The media converter of claim 27, wherein the second medium comprises a metallic conduction path.

36. (Canceled)

37. (Currently Amended) A media converter comprising:

a switch having a first end and a second end, the first end capable of coupling to any of a plurality of potential sources of a data signal, the second end coupled to an input port of a physical interface that converts the data signal from a signal that propagates along a first medium to a signal that propagates along a second medium;

at least one biasing switch enabling a directional connection between the physical interface and the plurality of potential sources;

an optical transceiver coupled to the physical interface;

a tri-state converter configured to convert a tri-state signal provided by the physical interface to a two-bit digital signal, the two-bit digital signal identifying a data rate at which the data signal will be communicated; and

means for controlling the switch so as to couple the input port of the physical interface to one of the plurality of potential data sources actually carrying a data signal;

wherein the physical interface detects a data rate of the data signal.

38. (Currently Amended) A network arrangement comprising:

a media converter including:

a switch having a first end and a second end, the first end capable of coupling to any of a plurality of potential sources of a data signal, the second end coupled to an input port of a physical interface that converts the data signal from a signal that propagates along a first medium to a signal that propagates along a second medium;

at least one biasing switch enabling a directional connection between the physical interface and the plurality of potential sources;

an optical transceiver coupled to the physical interface;

a tri-state converter configured to convert a tri-state signal provided by the physical interface to a two-bit digital signal communicating a data rate at which the data signal will be communicated;

means for controlling the switch so as to couple the input port of the physical interface to one of the plurality of potential data sources actually carrying a data signal;

wherein the physical interface detects a data rate of the data signal;

a first network device coupled via the first medium to the switch within the media converter; and

a second network device coupled via the second medium to the optical transceiver within the media converter.

39. (Original) The network arrangement of claim 38, wherein the first network device comprises a switch.

40. (Original) The network arrangement of claim 38, wherein the first network device comprises a hub.

41. (Original) The network arrangement of claim 38, wherein the first network device comprises a workstation.

42. (Original) The network arrangement of claim 38, wherein the first medium is a metallic conductor.

43. (Original) The network arrangement of claim 38, wherein the second medium is an optical fiber.

44. (Original) The network arrangement of claim 38, wherein the first medium is an optical fiber.

45. (Original) The network arrangement of claim 38, wherein the second medium is a metallic conductor.